

## EXPANDABLE CONTAINER WITH PULL CORD

### CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of Application No. 10/662,219, filed September 12, 2003, now pending, which is a continuation-in-part of Application No. 10/105,987, filed March 25, 2002, now pending, which is a continuation-in-part of Application No. 09/822,098, filed March 30, 2001, now abandoned. The entire contents of each of the aforementioned patent applications are incorporated herein by reference.

### FIELD

[0002] The present invention relates generally to expandable containers movable from a collapsed position to an expanded position, and more particularly (but not exclusively) to expandable containers which include a pull cord that when pulled expands the container walls to their expanded position.

### BACKGROUND

[0003] Conventionally, expandable containers, such as cardboard boxes, can be formed in two positions, expanded or collapsed. The collapsed position typically corresponds to a fully flattened container, such as a box including its bottom, top and sides generally parallel with one another. This collapsed position simplifies container storage when not in use and reduces manufacturing complexity since such container may often be constructed from a single piece of material, such as cardboard.

[0004] One drawback associated with such containers is the complexity with which the containers are assembled. Often, container bottoms are formed from multiple portions that fold inward for sealing with tape or glue, forming a container bottom. Assembling such containers requires careful attention to the detailed container construction, requiring deliberate and precise folding of portions to expand the container from a flattened position. Such an assembly often also requires an

additional sealing mechanism, such as glue. These containers are not useful for certain applications and users, due to their assembly complexity. This is especially true if such a container is to be used as a novelty item, gift or promotional offering, where the party providing the container wishes that the user use it with little difficulty or complex thought.

[0005] There is a need, therefore, for a product that incorporates container expandability but with an ease of use that would not deter the recipient from operating such a device.

## SUMMARY

[0006] In one embodiment, an expandable container generally includes at least two walls pivotably coupled along at least two junctures so as to lie generally flat in a collapsed position. The container also includes a flap pivotably coupled to at least one of the walls. A pull cord is coupled to the flap such that pulling the cord pivotably moves the flap relative to the walls thereby expanding the walls apart from one another from the collapsed position to an expanded position.

[0007] Further areas of applicability of the present invention will become apparent from the detailed description provided hereinafter. It should be understood that the detailed description and specific examples below, while indicating exemplary embodiments of the invention, are intended for purposes of illustration only and are not intended to limit the scope of the invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The present invention will be more fully understood from the detailed description and the accompanying drawings, wherein:

[0009] Figure 1 is a perspective view of an expandable container according to one embodiment of the present invention;

[0010] Figure 2 is a front elevation view of the expandable container of Figure 1 in an expanded position;

**[0011]** Figure 3 is a plan view of the expandable container of Figure 1 in a collapsed position;

**[0012]** Figure 4 is a plan view of the expandable container of Figure 1 in an unfolded form;

5 **[0013]** Figure 4A is a perspective view of another embodiment of an expandable container of the present invention;

**[0014]** Figure 5 is a perspective view of another embodiment of an expandable container of the present invention;

10 **[0015]** Figure 6 is a front elevation view of the expandable container of Figure 5 in an expanded position;

**[0016]** Figure 7 is a plan view of the expandable container of Figure 5 in a collapsed position;

**[0017]** Figure 8 is a plan view of the expandable container of Figure 5 in an unfolded form;

15 **[0018]** Figure 9 is a perspective view of another embodiment of an expandable container of the present invention;

**[0019]** Figure 10 is a perspective view of another embodiment of an expandable container of the present invention;

20 **[0020]** Figure 11 is a perspective view of another embodiment of an expandable container of the present invention;

**[0021]** Figure 12 is a perspective view of another embodiment of an expandable container of the present invention;

**[0022]** Figure 13 is a perspective view of another embodiment of an expandable container of the present invention;

25 **[0023]** Figure 14 is a perspective view of another embodiment of an expandable container of the present invention;

**[0024]** Figure 15 is a perspective view of another embodiment of an expandable container of the present invention;

30 **[0025]** Figure 16 is a perspective view of another embodiment of an expandable container of the present invention;

**[0026]** Figure 17 is a side elevation view of the expandable container of Figure 16 in an expanded position;

**[0027]** Figure 18 is a rear elevation view of the expandable container of Figure 16 in an expanded position;

5 **[0028]** Figure 19 is a perspective view of the expandable container of Figure 16 in an expanded position with the lid in the closed position;

**[0029]** Figure 20 is a plan view of the expandable container of Figure 16 in a collapsed position;

10 **[0030]** Figure 21 is a plan view of the expandable container of Figure 16 in an unfolded form;

**[0031]** Figure 22 is a perspective view of another embodiment of an expandable container of the present invention and illustrating a lid in a closed position;

15 **[0032]** Figure 23 is a side elevation view of the expandable container of Figure 22 in an expanded position with the lid in an open position;

**[0033]** Figure 24 is a rear elevation view of the expandable container of Figure 22 in an expanded position with the lid in an open position;;

**[0034]** Figure 25 is a perspective view of the expandable container of Figure 22 in an expanded position with the lid in an open position;

20 **[0035]** Figure 26 is a plan view of the expandable container of Figure 22 in a collapsed position;

**[0036]** Figures 27A and 27B are plan views of first and second portions of the expandable container of Figure 22 in unfolded form; and

25 **[0037]** Figures 28A through 28C illustrate various stages during the expansion of the expandable container of Figure 22.

#### DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

30 **[0038]** Referring now to the drawings, and particularly to Figure 1, an expandable container of the present invention is generally designated by the reference numeral 21. The container 21 comprises at least two walls 25, preferably

four, pivotably inter-connectable along at least two junctures 29, preferably four. These walls 25 may be formed from cardboard, paper or other stiff material. Preferably, the walls 25 may be covered with photographs, text, advertisements, and/or graphics (not shown), making the container 21 more visually appealing and/or  
5 suitable for advertisement purposes as described below. The container 21 may be formed in any size, but the preferred embodiment is directed to a container for holding articles such as pencils, paper clips, a scarf, food items, etc. Figures 1 and 2 show the container 21 in an expanded position, where the walls 25 cooperate to form an upwardly opening container including a cavity 33 for holding articles (not  
10 shown). When in a collapsed position, as shown in Figure 3, these walls 25 lie substantially flat and parallel with respect to one another. In the collapsed position, the cavity 33 is no longer apparent.

**[0039]** To facilitate altering the container 21 from the collapsed position (Figure 3) to the expanded position (Figures 1 and 2), a flap 37 is attachable to at  
15 least one wall 25 along a hinged seam 41 and can pivotably move with respect to the wall about the seam 41 (Figure 2). Movement of the flap 37 downward, as shown in phantom lines in Figure 2, expands the walls 25 apart from one another, converting the container 21 from its collapsed position to its expanded position. As with the walls 25 alone, the walls and flap 37 also fold together to a substantially flat,  
20 collapsed position, so that the container 21 may be more easily stored or shipped. Although designating each part of the container 21 as either wall 25 or flap 37 is preferred, the walls and flap may also be referred to more generally as panels of the container. The term panel may be used throughout as a generic term for any structural portion of the container 21, or any container named herein, including those  
25 portions that define walls, flaps, lids or portions of the container.

**[0040]** At least one wall 25, and preferably all four walls, additionally includes an upwardly folding stop 45 extending from the bottom edge of the wall along a fold line 49. Each stop 45 is preferably folded upward for substantially flatwise engagement with the corresponding wall 25 and attached to the wall 25, for  
30 example, with an adhesive or other suitable fastening device. Accordingly, when the

flap 37 rotates downward to its expanded position, the stops 45 arrest flap movement at the proper orientation.

5       **[0041]** To simplify the process of moving the flap 37 and erecting the container 21, a pull cord 53 is attachable to the flap 37, preferably by threading the pull cord through two holes 57 in the flap 37. Other means for attaching the pull cord 53, such as adhesives or slots in the flap 37, are also contemplated as within the scope of the present invention. Pulling the pull cord 53 downward pivotably moves the flap 37 with respect to the walls 25 to expand the container 21. The pull cord 53 allows a user unfamiliar with the container 21 to erect the container from its collapsed to expanded position quickly and easily. Moreover, the pull cord 53 makes the container 21 readily usable by children, the infirm or users with little time or inclination to study a more complex container. A pull tab 61 attached to the pull cord 53. The pull tab 61 can be attached to the pull cord 53 in any number of ways, including adhesives, tab and slot mechanisms, tape, etc. In the illustrated embodiment of Figures 1 through 4, the pull tab 61 is folded generally in half about and attached to two free ends of pull cord 51. In another exemplary embodiment, the pull cord includes a free end having a barb or stop, and the other free end of the cord is threaded through an opening or hole in the tab. Alternatively, other suitable fastening methods can be used to attach the pull tab to the pull cord in the various container embodiments described herein.

15       **[0042]** The pull tab 61 can be labeled with text or graphics (not shown) helps guide the user regarding how to use the container 21. For instance, the pull tab 61 may bear the words "Pull Here," suggesting to the user that pulling on the tab will expand the container 21.

25       **[0043]** As shown in Figure 3, the pull tab 61 and free ends of the pull cord 53 to which the pull tab 61 is attached extend from the container 21 even when the container 21 is in the collapsed position. This allows a user to readily access the pull tab 61.

30       **[0044]** In the preferred embodiment, the walls 25 and flap 37 are of unitary construction, although the present invention is readily applicable to containers

formed from multiple pieces of material which are attached to one another to form a container. Figure 4 shows a preferred embodiment of the container 21 in its unfolded form, where the walls 25, flap 37 and stops 45 each are formed from a single piece of material. The unfolded container 21 additionally includes a segment 65 extending  
5 from a wall 25 of the unfolded container connectable along only one juncture 29. The segment 65 is designed for flatwise engagement with the wall 25 on the opposite end of the unfolded container 21, for securing the container walls in a continuous series, forming the container perimeter. The segment 65 is attachable to the opposite wall 25 in any number of ways, including adhesives, tab and slot  
10 mechanisms, tape, etc.

**[0045]** Furthermore, as shown in Figures 1-4, the walls 25 are preferably oriented perpendicular to the flap 37 when in the expanded position. When expanded, the flap 37 forms the bottom of the container 21 while the walls 25 form the container sides. Moreover, adjacent walls 25 are oriented perpendicular to one  
15 another, forming a generally rectangular container 21. Although this represents the preferred embodiment, the walls 25 and flap 37 of the container 21 may lie in any number of orientations without departing from the scope of the present invention. A sampling of such containers will be discussed in greater detail below.

**[0046]** The present container 21 may be used to hold articles, such as a  
20 scarf, while in its collapsed position. Such an article may be contained within the container 21 while in the collapsed position, because the article adds little bulk to the collapsed container. The article may then serve as a surprise to the user when expanding the container 21 from its collapsed position to its expanded position for the first time. In those embodiments in which the article is capable of expanding to  
25 occupy the cavity 33 from a substantially flat, collapsed position, the presence of an article within the previously collapsed container 21 is counterintuitive.

**[0047]** Figure 4A depicts another version of the present invention that is a variation of the container 21 of Figures 1-4. The container depicted in Figure 4A is designated generally by 21'. The container 21' includes walls 25, junctures 29, a  
30 cavity 33 when expanded, a flap 37, a pull cord 53 and a pull tab 61, generally as set

forth above. In addition, one wall 25 of the container 21, preferably the wall opposite the wall where the flap 37 attaches along hinged seam 41, includes a hole 71. The pull cord 53 passes through the hole 71 to guide the pull cord as the pull cord is pulled and the container expands. Furthermore, the container 21' includes a support member 75 extending across the interior of the container from the top of two adjacent stops 45. This support member 75 folds flat along fold line 77 when the container 21' is in its collapsed position, and unfolds to support the flap 37 when the container is in its expanded position. The support member 75 is preferably formed from the same single piece of material as the walls 25, flap 37 and stops 45 of the container 21'. It is also contemplated that the support member 75 could be formed from an additional piece of material attached to the container 21'.

**[0048]** Turning to another version of the present invention, shown in Figures 5-8, an expandable container 121 includes four walls 125 that are not perpendicular to the flap 137 when the container is in the expanded position. More specifically, the walls 125 are inwardly directed toward one another. The container 121 includes similar features of the preferred embodiment, including junctures 129 between the walls 125, a movable flap 137, a hinged seam 141 making the flap connectable to the container and a series of stops 145 for folding into flatwise engagement with the walls along multiple fold lines 149. The container 121 is generally pyramid-shaped, however, wherein the movable flap 137 forms a base of the pyramid and the walls 125 form sides of the pyramid. At least one of the walls 125 defines a void 151, creating an opening near the peak of the pyramid-shaped container 121. When the base of the container 121 is directed downward, the opening is upwardly directed for collection of articles within the container.

**[0049]** The container 121 further includes a pull cord 153 threaded through holes 157 in the flap 137 and including a pull tab 161 attachable to the free end of the pull cord 153. The pull cord 153 actuates movement of the flap 137, which includes two portions 169 that fold about one another along a fold line 173. By folding in half, when moving from the expanded to the collapsed position, the flap 137 moves upward toward the opening of the container 121. Because the walls 125



are inwardly directed, the flap 137 must fold so that it can fit within the collapsed container 121. Finally, the container includes a segment 165 shaped and sized for flatwise engagement with the wall 125 on the opposite end of the unfolded container 121, for securing the container walls in a continuous series, forming the container  
5 perimeter.

[0050] Referring now to Figure 9, another version of a collapsible container of the present invention is generally designated by the reference numeral 221. The container 221 includes panels, generally indicated by 223, which include walls 225 joined at junctures 229 and a flap 237. The container 221 functions  
10 generally as indicated above, except that the walls 225, rather than pivoting with respect to one another, are capable of bowing outward as the flap 237 is pivoted downward by a pull cord 239, forming the container. The flap 237 is generally circular in shape, so that the bottom of the container 221 is round when in the expanded position. The top of the container 221, however, is not round, because the  
15 walls 225 are formed from a stiff material, such as cardboard, folded along the junctures 229 so that the walls bend less than at the bottom, wherein the top of the container retains an oblong shape. The container 221 further includes a pull tab 241 attachable to the pull cord 239 and a stop 243 for arresting pivoting movement of the flap 237.

20 [0051] Referring now to Figure 10, another version of the collapsible container of the present invention is generally designated by the reference numeral 251. As before, the container 251 includes walls 253, a flap 255 and a pull cord 257 for erecting the container from a collapsed position to an expanded position, as shown. The container 251 additionally includes a lid 261 attachable to one wall 253  
25 and pivotable with respect to the container. The pull cord 257 is attachable to both the flap 255 and the lid 261, so that pulling on the pull cord to expand the container 251 also pulls the lid partially downward to demonstrate movement of the lid to the user. Moreover, the walls 253' adjacent the wall 253 connectable to the lid 261 include vertical fold lines 265, facilitating inward folding of the walls when the  
30 container is in a collapsed position. By folding inward, these walls 253' allow the

container 251 to collapse to a smaller overall size. In this version, an article such as a compact disc 263 may be placed within the collapsed container 251. As the container 251 expands from the collapsed position to the expanded position, the compact disc 263 rotates with the flap 255, thereby orienting the compact disc 263 within the container 251. The container 251 further includes a pull tab 267 attachable to the pull cord 257 and a stop 269 for arresting pivoting movement of the flap 255.

**[0052]** Another version of the container, shown in Figure 11, is generally designated by the reference numeral 271. The container includes walls 273, a flap 275 and a pull cord 277 generally as above. Moreover, the container 271 includes a ring-shaped rib 281 attachable to one of the walls 273 and pivotable to a generally horizontal position with the flap 275. The rib 281 is designed to retain the walls 273 of the container in an expanded position. The pull cord 277 is attached to both the rib 281 and the flap 275. Pulling the pull cord 277 pivots the rib 281 and flap 275 from a collapsed position, where the rib and flap lie generally parallel to the walls, to an expanded position, where the rib and flap are generally perpendicular to the walls. The container 271 further includes a lid 283, attachable to and pivotable with one of the walls 273 of the container. The container 271 further includes a pull tab 285 attachable to the pull cord 277 and a stop 287 for arresting pivoting movement of the flap 275.

**[0053]** Referring now to Figure 12, yet another version of the container of the present invention is indicated generally by reference numeral 291. The container includes three walls 295, two of which are connectable to a central wall 295'. As with the previous versions, the container 291 has both a collapsed position and an expanded position. When collapsed, the walls 295, 295' lie substantially parallel. The two outermost walls 295 are not connectable to one another along a pivotable junction as with the previous version. Rather, the bottom portion of one wall 295 is folded upward to form a crease 303 near the bottom of the wall 295. The bottom edge of the other wall 295 engages the crease 303, whereby the walls 295 may slide with respect to one another along the length of the crease. To expand the container, the user again pulls a pull cord 305 that is threaded through a series of holes 307

formed in the outermost walls 295. As the cord 305 passes through the holes 307, the outermost walls 295 move inward toward one another while the crease 303 remains engageable with the bottom edge of the wall, thereby guiding the walls in flatwise, slidable engagement with one another. At the same time, the edges of the central wall 295' move inward, thereby causing the central wall to bow outwardly. The central wall 295' is shaped both by the movement of its edges inward and the movement of a semicircular flap 311 downward. The flap is also connectable to the pull cord 305, further shaping the central wall 295' in a generally arcuate shape. Finally, the pull cord 305 is connectable to a retaining ring 315 that slides downward over the upper portion of the container 291 to further secure the walls 295, 295' in the desired orientation. The container 291 further includes a pull tab 317 attachable to the pull cord 305 and a stop 319 for arresting pivoting movement of the flap 311.

**[0054]** Turning to Figure 13, another version of the container of the present invention is indicated generally by reference numeral 321. The container includes a flap 323 that is a generally parallel extension of a panel 327. As with the previous version, actuating a pull cord 329, expands the container 321 to an expanded position. As it expands the container, the flap 323 creates an interference fit between itself and a juncture 333 disposed between two adjacent panels 337, thereby securing the container in the expanded position. Only by disengaging the flap 323 from the interference fit with the juncture 333 can the user alter the container 321 from its expanded position. In addition, the container 321 includes two panels 337' sized and shaped in an outline reminiscent of a recognizable object, such as a fish, diamond ring, etc., so that the container shape is suggestive of the object. The container 321 further includes a pull tab 339 attachable to the pull cord 329.

**[0055]** Referring now to Figure 14, another version of the container of the present invention is indicated generally by reference numeral 345. The container 345 includes panels 347, each extendable outward from a central panel 347', or bottom, of the container. These panels 347 comprise the sides of the container 345 when in the expanded position. As depicted in Figure 14, web panels 353 bridge the

gaps between each pair of adjacent panels 347. A pull cord 351 is threadably connectable with at least two, and preferably each of the panels 347. The pull cord 351 includes two free ends extendable from the container 345 for pulling simultaneously to shorten the length of cord threading through the container, thereby  
5 expanding the panels 347 from the collapsed position to the expanded position. Preferably, the web panels 353 of the container 345 are directed inward to protect an article which may be positioned within the container 345, such as a fragile glass ornament or statuette. The web panels 353 may also be directed outward or removed entirely without departing from the scope of the present invention. Here the  
10 pull cord 351 may be formed of an attractive material because a portion of the cord is visible while the container is in use.

**[0056]** Referring now to Figure 15, another version of the container of the present invention is indicated generally by reference numeral 371. The container includes multiple walls 375 joined at multiple junctions 377, forming a continuous  
15 circuit of walls in a circuitous arrangement. Six walls are depicted in Figure 15, although fewer or greater number of walls (e.g., 3, 4, 5, 7, 8, etc.) are also contemplated as within the scope of the present invention. The container 371 further includes a flap 379 attachable to at least one of the walls 375 for pivotable movement with respect to the walls. As with the previous versions, the container 371  
20 is capable of lying substantially flat in a collapsed position and expanding to an expanded position. In addition, the container 371 has wall extensions 381 extending upward from the top of each wall 375, or from at least some of the walls. These extensions 381 are movable relative to the walls 375 along fold lines 385. Each of the extensions 381 includes a hole 389, through which a pull cord 393 passes. The  
25 pull cord 393 additionally passes through the container 371 and attaches to the flap 379. From the collapsed position, when a pull tab 397 attached to the end of the pull cord 393 is pulled, the extensions 381 are drawn closer together and the flap 379 is drawn upward toward the walls of the container 371. As with the previous versions, this causes the container 371 to transform from its collapsed position to its expanded  
30 position. Once expanded, the flap 379 is positioned perpendicular to the walls 375 of

the container 371 and the wall extensions 381 form a cone-shaped top of the container 371. The container further includes stops 401 as disclosed in the previous versions. Moreover, stops 401' are attached to the inner surface of the walls 375 of the container 371 to limit upward movement of the flap 379 as it is drawn into the container by the pull cord 393. These stops 401, 401' cooperate to create a notch 405 that helps hold the flap in the appropriate position. The container 371 further includes windows 409 cut from the walls of the container that allow viewing into the inside of the container.

**[0057]** Figures 16 through 21 illustrate another embodiment of a container which is generally indicated by reference numeral 521. As shown, the container 521 includes four walls 525 pivotably coupled along four junctures 529. The container 521 also includes a flap 537 pivotably coupled to at least one wall 525 along a hinged seam 541 (Figure 21). A lid 550 is also pivotably coupled to at least one wall 525 along a hinge seam 543.

**[0058]** As shown in Figure 20, the walls 525, flap 537 and lid 550 can be folded together to a substantially flat, collapsed position. This, in turn, allows the container 521 to be more easily stored or shipped.

**[0059]** Referring to Figure 21, the walls 525 can also include upwardly folding stops 545 extending from the bottom edges of the walls along fold line 549. When the container 521 is assembled, the stops 545 are preferably folded upward for substantially flatwise engagement with their respective wall 525 of attachment. When the flap 537 rotates downward to its expanded position, the stops 545 arrest flap movement at the proper orientation.

**[0060]** A pull cord 553 is attached to the flap 537, preferably by threading and looping the pull cord 553 through two holes 557. However, other suitable methods can also be used to attach the pull cord 553 to the flap 537 such as adhesives or slots in the flap 537.

**[0061]** A pull tab 561 can also be attached to the pull cord 553. In the illustrated embodiment, the pull tab 561 is folded generally in half about and attached to two free ends of pull cord 51, for example with an adhesive. In another

exemplary embodiment, the pull cord includes a free end having a barb or stop, and the other free end of the cord is threaded through an opening or hole in the tab. Alternatively, other suitable fastening methods can be used to attach the pull tab to the pull cord in the various container embodiments described herein.

5           **[0062]**   The pull tab 561 can be labeled with text or graphics (not shown) to help guide the user on how to use the container 521. For instance, the pull tab 561 may bear the words "Pull Here," suggesting to the user that pulling on the tab 561 will expand the container 521. Preferably, the cord 553 has a sufficient length such that the pull cord 553 and pull tab 651 attached thereto extends from the container  
10 521 even when the container 521 is in the collapsed position. This allows a user to readily access the pull tab 561 when the user wants to expand the container 521.

**[0063]**   To help guide the cord 553 as it is pulled to expand the container 521, the pull cord 553 can also be threaded through at least one opening or hole 571 in at least one of the walls 525. Further, the stop 545 associated with the wall 525  
15 through which the cord 553 is threaded can include a notch for accommodating the pull cord 553.

**[0064]**   To expand the container 521, the pull cord 553 is pulled to pivotably moves the flap 537 downward relative to the walls 525 (Figure 17), thereby expanding the walls 525 apart from one another from the collapsed position (Figure  
20 20) to the expanded position (Figure 16). This, in turn, also positions the flap 537 to define substantially the entirety of a bottom surface within the expanded container 521.

**[0065]**   The expansion of the container 521 can also creates an interference fit between the flap 537 and at least one juncture 529 between two  
25 adjacent walls 525. This interference fit frictionally maintains the container 521 in the expanded position.

**[0066]**   The lid 550 is pivotable between at least an open position (Figure 16) in which the lid 550 exposes an opening 551 into the cavity 533 defined by the expanded container 521 and a closed position (Figure 19) in which the lid 550 closes  
30 the opening 551. In the illustrated embodiment, the lid 550 includes a perimeter

edge that defines an outline resembling a flower bouquet. Alternatively, the perimeter edge of the lid can also define other geometric shapes or recognizable objects such as circles, triangles, rectangles, fish, among others.

**[0067]** As shown in Figure 19, the cord 553 is adapted (e.g., has sufficient length and/or elasticity, etc.) to be disposed over the lid 550 and then be removably engaged to the container 521 to retain the lid 550 in the closed position. In the illustrated embodiment, at least one of the walls 525 defines a slot or notch 555 sized to removably receive and retain therein the cord 553 after the cord 553 has been pulled over the lid 550. Alternatively, other suitable methods of removably engaging the cord 553 to the container 521 can be employed such as Velcro hook and loop fasteners, etc.

**[0068]** In the illustrated embodiment, the walls 525, flap 537, lid 550, and stops 545 are of unitary construction, although the present invention is readily applicable to containers formed from multiple pieces of material attachable to one another. Figure 21 shows the container 521 in its unfolded form in which the walls 525, flap 537, lid 550, and stops 545 are formed from a single piece of material.

**[0069]** The unfolded container 521 additionally includes a segment 565 extending from a wall 525 of the unfolded container and which is connectable along only one juncture 529. The segment 565 is designed for flatwise engagement with the wall 525 on the opposite end of the unfolded container 521, for securing the container walls in a continuous series to form the container perimeter. The segment 565 can be attached to the opposite wall 525 in any number of ways, including adhesives, tab and slot mechanisms, tape, Velcro hook and loop fasteners, etc.

**[0070]** In the illustrated embodiment, the walls 525 are oriented perpendicular to the flap 537 when the container 521 is expanded. In addition, the flap 537 forms the bottom of the expanded container 521 while the walls 525 form the expanded container's sides. Moreover, adjacent walls 525 are oriented perpendicular to one another, forming a generally rectangular container 521. Although this represents a preferred embodiment, the walls 525 and flap 537 of the

container 521 may lie in any number of orientations without departing from the scope of the present invention.

[0071] Figures 22 through 28 illustrate another embodiment of a container which is generally indicated by reference numeral 621. As shown, the container 621 includes six walls 625 pivotably coupled along six junctures 629 to form a generally hexagonally shape. Alternatively, the walls 625 of the container 621 can define other suitable shapes without departing from the scope of the present invention.

[0072] The container 621 also includes a first flap 637 which is pivotably coupled to at least one wall 625 along a hinged seam 641 (Figure 27B). A lid 650 is pivotably coupled to at least one wall 625 along a hinge seam 643 (Figures 24, 25 and 27A).

[0073] The container 621 further includes a second flap 638 which includes two portions 669' and 669" that fold about one another along a fold line 673 (Figure 27A). The flap portion 669' is pivotably coupled to the wall 625 along a hinged seam 642. The other flap portion 669" is attached to the flap 637 (Figure 28) for example, with adhesives, tab and slot mechanisms, tape, Velcro hook and loop fasteners, other suitable fastener, etc.

[0074] The flap portions 669' and 669" fold generally flat about one another along the fold line 673 when moving from the expanded to the collapsed position, as shown in Figure 28A. Conversely, when moving from the collapsed to the expanded position, the flap portions 669' and 669" unfold such that the second flap 638 defines a second or double bottom of the expanded container 621, as shown in Figure 28C.

[0075] In the illustrated embodiment, the second flap 638 is shown positioned beneath the first flap 637. In other embodiments, however, the second flap can be positioned above the first flap. In either case, the double bottom feature allows the expanded container 621 to support heavier articles therein.

[0076] As shown in Figures 26 and 28A, the walls 625, flaps 637 and 638, and lid 650 can be folded together to a generally flat, collapsed position. This, in turn, allows the container 621 to be more easily stored or shipped.



[0077] Referring now to Figures 27A and 27B, the walls 625 can also include upwardly folding stops 645 extending from the bottom edges of the walls 625 along fold lines 649. When the container 621 is assembled, the stops 645 are preferably folded upward for generally flatwise engagement with their respective wall 625 of attachment. When the flap portions 669' and 669" of flap 638 unfold to the unfolded/expanded position, the stops 645 arrest movement of flaps 637 and 638 at a proper or preferred orientation.

[0078] A pull cord 653 is attached to the flap 637, preferably via two holes 657, respectively. Other suitable methods, however, can also be used to attach the pull cord 653 to the flap 637 such as adhesives or slots defined in the respective flap 637. Further, the pull cord 653 can instead be attached to the second flap 638 such that pulling the pulling cord 653 causes the flap portions 669' and 669" to unfold, which, in turn, can cause the flap 637 attached to flap portion 669" to pivotably move relative to the walls 625.

[0079] A pull tab 661 can be attached to the pull cord 653. In the illustrated embodiment, the pull tab 661 is folded generally in half about and attached to two free ends of pull cord 651. In another exemplary embodiment, the pull cord includes a free end having a barb or stop, with the other free end of the cord is threaded through an opening or hole in the tab. Alternatively, other suitable fastening methods can be used to attach the pull tab to the pull cord in the various container embodiments described herein.

[0080] As shown in Figure 28A, the pull cord 653 is preferably sized (i.e., has sufficient length) such that the free ends of the pull cord 653 (and pull tab 661 attached thereto) extend from the container 621 even when the container 621 is in the collapsed position. This allows a user to readily access the pull cord 653 for when the user wants to expand the container 621.

[0081] The pull tab 661 can be labeled with text or graphics (not shown) to instruct the user on how to expand the container 621. For instance, the pull tab 661 may bear the words "Pull Here," suggesting to the user that pulling on the tab 661 will expand the container 621.

[0082] To help guide the cord 653 as it is pulled to expand the container 621, the pull cord 653 can be threaded through one or more openings or holes 671 in at least one of the walls 625. Additionally, or alternatively, the flap 638 can also define one or more openings or holes 672 (Figure 27A) which help guide the cord 653 as it is pulled to expand the container 621.

[0083] Figures 28A, 28B, and 28C generally illustrate an exemplary manner in which the container 621 can be expanded. As shown, a user can use one hand 663 to pull the pull tab 661 attached to the pull cord 653 while holding the container 621 with his or her other hand 664. In this exemplary manner, both free ends of the cord 653 are thus pulled in the same direction relative to the container 621. As the user pulls the pull tab 661, the pull cord 653 moves through the openings 671 and 672 and pivotably moves the flap 637 relative to the walls 625. This, in turn, causes the flap 638 to unfold and the walls 625 to expand from the collapsed position (Figure 28A) to the expanded position (Figure 28C). In the expanded position, the flaps 637 and 638 respectively define first and second bottoms of the expanded container 621. In contrast, Figures 1 through 4 illustrate a container 21 which includes only one pivotable flap 37 that is positionable to define substantially the entire bottom within the expanded container 21.

[0084] With further reference to Figures 22 through 28, the expansion of the container 621 can also create an interference fit between the first flap 637 and at least one juncture 629 between two adjacent walls 625 and/or between the second flap 638 and at least one juncture 629 between two adjacent walls 625. This interference fit can frictionally maintain the container 621 in the expanded position.

[0085] The lid 650 is pivotable between at least an open position (Figure 25) in which the lid 650 exposes an opening 651 into the cavity 633 defined by the expanded container 621 and a closed position (Figure 22) in which the lid 650 closes the opening 651. In the illustrated embodiment, the lid 650 includes a perimeter edge that defines an outline resembling a flower bouquet. Alternatively, the perimeter edge of the lid can define other geometric shapes or recognizable objects such as circles, triangles, rectangles, animals, fishes, among others.

**[0086]** As shown in Figure 22, the cord 653 is adapted (e.g., has sufficient length and/or elasticity, etc.) to be disposed over the lid 650 and then be removably engaged to the container 621 to retain the lid 650 in the closed position. In the illustrated embodiment, at least one of the walls 625 defines a slot or notch 655  
5 sized to removably receive and retain therein the cord 653 after the cord 653 has been pulled over the lid 650. Alternatively, other suitable methods of removably engaging the cord 653 to the container 621 can be employed such as Velcro hook and loop fasteners, tape, etc.

**[0087]** Figure 27 illustrates two pieces 670' and 670" of unfolded material  
10 which are attachable to one another to form the container 621. As shown, the unfolded portion 670' includes segments 665 and 667 each extending from a corresponding wall 625, respectively, along only one juncture 629. The segments 665 and 667 are each designed for flatwise engagement with a corresponding wall 625' and 625" on the other unfolded portion 670", for securing the container walls in  
15 a continuous series to form the container perimeter. The segments 665 and 667 can be attached to their corresponding opposite wall 625' and 625" of portion 670" in any number of suitable ways, including adhesives, tab and slot mechanisms, tape, Velcro hook and loop fasteners, etc.

**[0088]** In the illustrated embodiment, the walls 625 are oriented generally  
20 perpendicular to the flaps 637 and 638 when the container 621 is expanded. In addition, the flaps 637 and 638 form a double bottom of the expanded container 621 while the walls 625 form the expanded container's sides. Moreover, adjacent walls 625 are oriented so as to form a generally hexagonal container 621, while the flaps 637 and 638 are each generally hexagonal. Although this represents a preferred  
25 embodiment of the container 621, the walls 625 and flaps 637 and 638 may lie in any number of orientations and be provided in various other shapes without departing from the scope of the present invention.

**[0089]** In another form, the present invention provides methods of expanding and/or closing a container. In one embodiment, the method generally  
30 includes pulling a pull cord coupled to a flap to pivotably move the flap relative to the

container walls to expand the walls apart from one another from a collapsed position to an expanded position. In various embodiments, the cord need only be pulled in a single direction to expand the container. For example, a user can pull the pull cord with one hand in a single direction while holding the container with his or her other  
5 hand. Preferably, the cord has a sufficient length to extend from the container even when the container is in the collapsed position, thereby allowing a user to readily access the pull cord.

**[0090]** The method can further include moving a lid pivotably coupled to at least one of the walls from an open position in which the lid exposes an opening  
10 defined by the expanded container to a closed position in which the lid closes the opening, positioning the cord over the lid, and removably engaging the cord with the container to retain the lid in the closed position. Further, moving the lid from the open position to the closed position can be accomplished by pulling the cord over the lid to pivotably move the lid from the open position to the closed position. The  
15 cord can be removably engaged to the container by positioning the cord within at least one slot defined by at least one of the walls of the container.

**[0091]** Additionally, pulling the cord coupled to the flap can also create an interference fit between the flap and at least one juncture between two adjacent walls of the container. Once created, this interference fit can frictionally maintain the  
20 container in the expanded position.

**[0092]** In another form, the present invention provides methods of advertising. In one embodiment, the method generally includes distributing an expandable container which includes at least one surface defining an advertisement. For example, the distributing can include providing containers to a source of goods  
25 or services and/or to another party for further distribution of the containers to existing or potential customers of the goods or services which are provided by the source and/or which are associated with the advertisement.

**[0093]** Any one of the various expandable containers 21, 21', 121, 221, 251, 271, 291 321, 371, 521, and 621 described above can be distributed for use an  
30 advertising display device. The indicia or advertising content defined by such

container(s) can include a wide range of trademarks, trade names, service marks, graphic images, graphic elements, designs, artwork, distinctive marks, identifying symbols, company logos, company contact information, text, alphanumeric characters, sports team insignias, names, monograms, photographs, among others.

5 In one exemplary embodiment, the indicia comprise printed advertisement content on each surface of the container which is visible to a user when the container is in the expanded position.

[0094] The advertising method can further include pulling the cord to expand the container to display the advertisement. In various embodiments, the cord  
10 need only be pulled in a single direction to expand the container. For example, a user can pull the free ends of the pull cord with one hand in a single direction while holding the container with the other hand. Preferably, the cord has a sufficient length such that the pull cord extends from the container even when the container is in the collapsed position, thereby allowing a user to readily access the pull cord.

15 [0095] The advertising method can further include positioning an article within the container such that the article is within the container in the collapsed position but is accessible to a user when the container is in the expanded position. The article can be related to goods or services advertised on the surface(s) of the container, although this is not required. The article may serve as a surprise to a user  
20 when expanding the container for the first time, thus reinforcing or strengthening the effectiveness of the advertisement(s) being displayed by the container. For example, Figure 10 illustrates an article such as a compact disc 263 placed within the collapsed container 251. As the container expands from the collapsed position to the expanded position, the compact disc 263 rotates with the flap 255, thereby orienting  
25 the compact disc 263 within the container 251. Alternatively, a wide range of other suitable articles (e.g., pencils, paper clips, scarves, food items, candy, etc.) can be positioned within any of the various containers such that the article is within the container in the collapsed position but is accessible to a user when the container is in the expanded position.

**[0096]** It can be understood that a kit would be useful for assembling any of the various containers described herein. Thus, another exemplary embodiment includes a kit that includes the components for assembling a container. By way of example only, a kit including a pull cord 53, pull tab 61, and unfolded container 21 (Figures 1 through 4) can be provided to a user such that the user then assembles the various components to form the expandable container 21. Or for example, a kit including a pull cord 653, pull tab 661, and portions 670" and 670" (Figures 22 through 28) can be provided to a user such that the user then must assemble the components to form the expandable container 621.

**[0097]** In addition to the various containers described herein, other containers of similar design are also contemplated as within the scope of the present invention. For instance, the container walls may also slope outwardly (not shown), forming a container with a progressively larger opening as one goes further upward on the container. The container may also be formed with walls in a combination of orientations, for example, inward, outward or vertical. Moreover, containers including a differently shaped flap are also contemplated as within the scope of the present invention (e.g., a triangle-shaped flap, a hexagonal flap, etc.). In sum, a variety of containers formed in various configurations and sizes are well within the scope of the present invention.

**[0098]** In view of the above, it will be seen that various advantageous results are achieved with the invention. For example, embodiments of the present invention provide expandable containers which are readily expandable to their expanded positions by pulling a pull cord thus making such containers easy to operate without complex instructions. Embodiments also provide expandable containers that can be readily collapsed for easy storage and/or transportation thereof. Embodiments also provide expandable containers which can be formed in various shapes and sizes for various applications and/or which can be covered with various indicia, designs, pictures, etc. to enhance their appearance and/or to display advertisements. Expandable containers of the present invention can be readily altered between their expanded and collapsed positions multiple times.

**[0099]** When introducing elements or features of the present invention and the exemplary embodiments, the articles "a", "an", "the" and "said" are intended to mean that there are one or more of such elements or features. The terms "comprising", "comprise", "including", "include", "having", and "have" are intended to  
5 be inclusive and mean that there may be additional elements or features other than those specifically noted.

**[0100]** The description of the invention is merely exemplary in nature and, thus, variations that do not depart from the gist of the invention are intended to be within the scope of the invention. Such variations are not to be regarded as a  
10 departure from the spirit and scope of the invention.